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Search History**DATE:** Thursday, February 27, 2003 [Printable Copy](#) [Create Case](#)**Set Name Query**

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*DB=USPT; PLUR=YES; OP=ADJ*L3 (updat\$ with performance\$ with attribut\$) same modem\$L2 (updat\$ with performance\$ with attribut\$)L1 (modem\$ with performanc\$ with updat\$)**Hit Count Set Name**

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END OF SEARCH HISTORY

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L3: Entry 11 of 16

File: USPT

Nov 7, 2000

DOCUMENT-IDENTIFIER: US 6145120 A

TITLE: Declaration programming language extension for procedural programming languages

Abstract Text (1):

Complex declarative programming capabilities are provided through an underlying procedural programming code by functionally providing the selection algorithm of known declarative processing arrangements in explicit conditional constructs in procedural language embodying a rule or rule function statement. This approach simultaneously provides declarative processes easily and simply in a relatively few lines of procedural code while isolating the processing to the rules and objects, themselves, thereby providing reduction in hardware overhead requirements and performance enhancements which will be more fully discussed below. Further, by providing for updating of attributes and relationships of objects together with time tags associated with the update and removal of objects from list for evaluation, imprecise evaluation and heuristic reasoning may be readily developed while providing further performance enhancements to known Lazy Evaluation procedures.

Detailed Description Text (7):

It should be appreciated in the following discussion of the invention, that it is a fundamental concept of the present invention, in contrast with prior declarative programming, to provide the selection algorithm functionally in explicit conditional constructs in procedural language embodying a rule or rule function statement. This approach simultaneously provides declarative processes easily and simply in a relatively few lines of procedural code while isolating the processing to the rules and objects, themselves, thereby providing reduction in hardware overhead requirements and performance enhancements which will be more fully discussed below. Further, by providing for updating of attributes and relationships of objects together with time tags associated with the update and removal of objects from list for evaluation, imprecise evaluation and heuristic reasoning may be readily developed while providing further performance enhancements to the Lazy Evaluation process.



US006145120A

United States Patent [19]
Highland

[11] **Patent Number:** **6,145,120**
 [45] **Date of Patent:** **Nov. 7, 2000**

[54] **DECLARATION PROGRAMMING
 LANGUAGE EXTENSION FOR
 PROCEDURAL PROGRAMMING
 LANGUAGES**

[75] **Inventor:** **Frederic D. Highland, New Midway,
 Md.**

[73] **Assignee:** **Lockheed Martin Corporation,
 Bethesda, Md.**

[21] **Appl. No.:** **09/046,637**

[22] **Filed:** **Mar. 24, 1998**

[51] **Int. Cl.⁷** **G06F 9/45**

[52] **U.S. Cl.** **717/1; 717/2; 703/23;
 706/47**

[58] **Field of Search** **395/701-703,
 395/705, 500.44, 500.47; 707/103; 706/45-48;
 703/23, 26**

[56] **References Cited**

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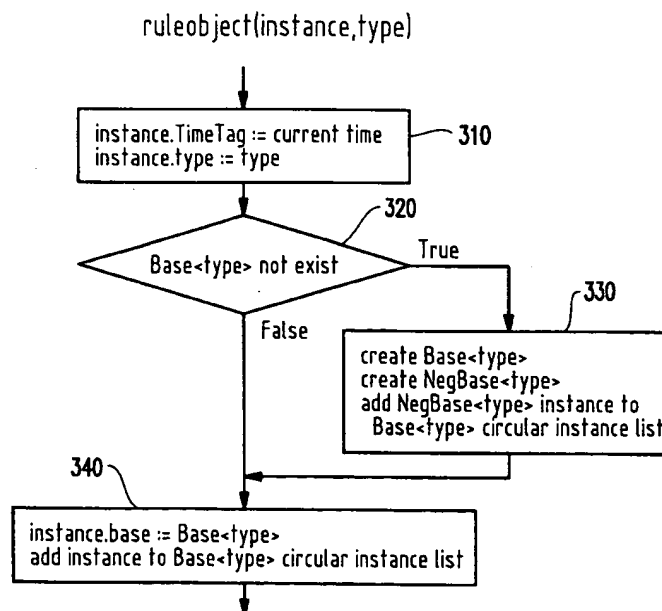
Primary Examiner—Kakali Chaki

Attorney, Agent, or Firm—McGuire, Woods, Battle & Boothe, LLP

[57] **ABSTRACT**

Complex declarative programming capabilities are provided through an underlying procedural programming code by functionally providing the selection algorithm of known declarative processing arrangements in explicit conditional constructs in procedural language embodying a rule or rule function statement. This approach simultaneously provides declarative processes easily and simply in a relatively few lines of procedural code while isolating the processing to the rules and objects, themselves, thereby providing reduction in hardware overhead requirements and performance enhancements which will be more fully discussed below. Further, by providing for updating of attributes and relationships of objects together with time tags associated with the update and removal of objects from list for evaluation, imprecise evaluation and heuristic reasoning may be readily developed while providing further performance enhancements to known Lazy Evaluation procedures.

22 Claims, 15 Drawing Sheets



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L3: Entry 12 of 16

File: USPT

May 23, 2000

DOCUMENT-IDENTIFIER: US 6067535 A

TITLE: Monitoring and retraining neural network

Detailed Description Text (302):

Upon receiving an UpdatePerformanceThreshold event from the GUI terminator the client will modify the evaluation.sub.-- performance attribute of the Fraud Detector Specification object (28) with the new performance threshold.

Detailed Description Text (356):

check if a performance update is required by interrogating the performance evaluation counter attribute of the fraud detection client, object (27), and determining if it equals the number of evaluations specified contained within the fraud detector specification, object (28). If a performance update is required then a performance evaluation request is created and the performance evaluation counter attribute is reset to zero. If a performance update is not required then the performance evaluation counter attribute is incremented.



US006067535A

United States Patent [19]
Hobson et al.

[11] **Patent Number:** **6,067,535**
 [45] **Date of Patent:** **May 23, 2000**

[54] **MONITORING AND RETRAINING NEURAL NETWORK**

[75] **Inventors:** **Phillip William Hobson; Peter Hamer,** both of Bishops Stortford; **Kevin John Twitchen,** Welwyn Garden; **Paul Colin Barson,** Hemel Hempstead; **Simon Field,** Welwyn Garden; **Timothy John Edwards,** Hertford, all of United Kingdom

[73] **Assignee:** **Notel Networks Corporation,** Montreal, Canada

[21] **Appl. No.:** **08/869,884**

[22] **Filed:** **Jun. 5, 1997**

[30] **Foreign Application Priority Data**

Jan. 21, 1997 [GB] United Kingdom 9701196

[51] **Int. Cl.⁷** **G06N 3/02**

[52] **U.S. Cl.** **706/10; 706/16; 706/25**

[58] **Field of Search** **706/10, 16, 25, 706/26**

[56] **References Cited**

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Primary Examiner—Eric W. Stamber

Assistant Examiner—Wilbert L. Starks

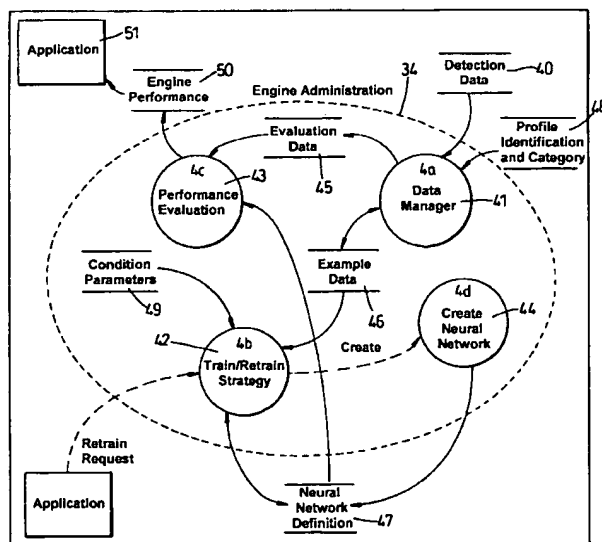
Attorney, Agent, or Firm—Lee, Mann, Smith, McWilliams, Sweeney & Ohlson

[57] **ABSTRACT**

A method of managing the processing of information using a first neural network, the information relating to the transmission of messages in a telecommunications network, uses the steps of:

- (i) monitoring the performance of the first neural network in processing the information;
- (ii) creating a second neural network of the same topology as the first when a predetermined performance threshold is reached, and
- (iii) retraining the second neural network while continuing to process the information using the first neural network. If the neural networks are implemented using objects, such retraining can be facilitated by using a persistence mechanism to enable the objects to be stored and moved. Applications in fraud detection.

17 Claims, 17 Drawing Sheets



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L3: Entry 15 of 16

File: USPT

Oct 27, 1998

DOCUMENT-IDENTIFIER: US 5828583 A

TITLE: Drive failure prediction techniques for disk drives

Brief Summary Text (19):

In yet another embodiment thereof, the present invention is of a method for predicting an imminent failure of an ATA disk drive. A plurality of attributes are selected for monitoring during operation of the ATA disk drive. These attributes include at least one self-preserving attribute, at least one performance attribute, at least one error rate attribute and at least one event count attribute. An initial value is determined for each one of the selected attributes. A threshold value is then selected for each of the self-preserving attributes, a threshold performance speed is selected for each of the performance attributes, a threshold error rate is selected for each of the error rate attributes and a threshold event count is selected for each of the event count attributes. If ATA disk drive failure prediction is enabled, the ATA disk drive is then monitored for occurrences of the self-preserving, performance, error rate and event count attributes. If, however, ATA disk drive failure prediction is not enabled, the ATA disk drive is monitored for occurrences of the self-preserving attributes. Each time an occurrence of the self-preserving, performance, error rate or event count attributes is monitored, the initial value for that attribute is updated. An imminent failure of the ATA disk drive is then predicted if the updated value of the attribute exceeds a corresponding threshold therefor.

Brief Summary Text (20):

In one aspect thereof, the updated value for an attribute is normalized and the normalized updated value compared with the corresponding threshold for that attribute when predicting an imminent failure of the ATA disk drive. In alternate aspects thereof, the attribute for which the occurrence was monitored may be an event count attribute such as a re-allocated sector count, a raw read error count, a spin retry count, a read channel margin, a drive calibration retry count or a drive power cycle count, a performance attribute such as spin up time, throughput performance and seek time performance, an error rate attribute such as a seek error rate or a self-preserving attribute such as a power-on hours count or a start/stop count. For event count attributes, imminent failure of the ATA disk drive is predicted if the updated value of the event count attribute exceeds the corresponding threshold event count. For performance attributes, imminent failure of the ATA disk drive is predicted if the updated value of the performance attribute exceeds the corresponding threshold performance speed. For error rate attributes, imminent failure of the ATA disk drive is predicted if the updated value of the error rate attribute for which the occurrence was monitored exceeds a corresponding threshold error rate. Finally, for self-preserving attributes, imminent failure of the ATA disk drive is predicted if the updated value of the self-preserving attribute for which the occurrence was monitored exceeds the corresponding threshold value for that attribute.

CLAIMS:

17. A method of predicting an imminent failure of a disk drive, comprising the steps of:

selecting a plurality of attributes for monitoring during operation of said disk drive, said plurality of attributes including at least one self-preserving attribute, at least one performance attribute, at least one error rate attribute and at least one event count attribute;

determining an initial value for each one of said at least one self-preserving attribute, at least one performance attribute, at least one error rate attribute and at least one event count attribute;

selecting a threshold value for each of said at least one self-preserving attribute, a threshold performance speed for each of said at least one performance attribute, a threshold error rate for each of said at least one error rate attribute and a threshold event count for each of said at least one event count attribute;

if disk drive failure prediction is enabled, monitoring said disk drive for occurrences of said at least one self-preserving attribute, at least one performance attribute, at least one error rate attribute and at least one event count attribute;

if disk drive failure prediction is not enabled, monitoring said disk drive for occurrences of said at least one self-preserving attribute;

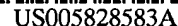
each time an occurrence of said at least one self-preserving attribute, said at least one performance attribute, said at least one error rate attribute or said at least one event count attribute is monitored, updating said initial value for said attribute for which said occurrence was monitored; and

predicting an imminent failure of said disk drive if said updated value of said attribute for which said occurrence was monitored exceeds a corresponding threshold for said attribute.

21. A method of predicting an imminent failure of a disk drive according to claim 17 wherein said attribute for which said occurrence was monitored was one of said at least one performance attribute and wherein the step of predicting an imminent failure of said disk drive if said updated value of said attribute for which said occurrence was monitored exceeds a corresponding threshold for said attribute further comprises the steps of:

comparing said updated value of said performance attribute for which said occurrence was monitored to said corresponding threshold performance speed; and

predicting an imminent failure of said disk drive if said updated value of said performance attribute for which said occurrence was monitored exceeds said corresponding threshold performance speed.



Bush et al.

[11] **Patent Number:** **5,828,583**

[45] **Date of Patent:** **Oct. 27, 1998**

[22] Filed: **Apr. 18, 1996**

Related U.S. Application Data

[56] **References Cited**

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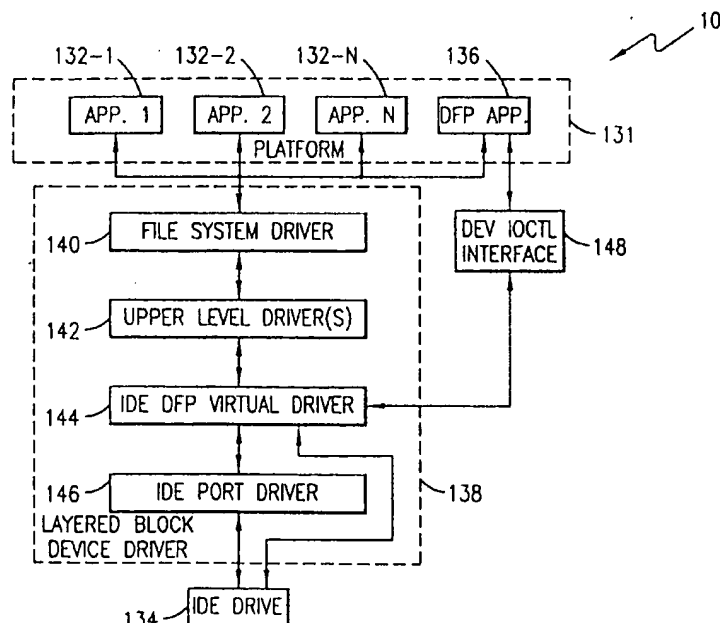
Colegrove, Dan; "Informational Exception Condition Reporting" ATA-3 Proposal (X3T10/95-111r1), IBM Corporation. Mar. 1, 1995.

Primary Examiner—James P. Trammell

[57] **ABSTRACT**

Method for predicting an imminent failure of a disk drive. A plurality of attributes are selected for monitoring during operation of the disk drive. These attributes may include self-preserving attributes, performance attributes, error rate attributes, and even count attributes. An initial value is determined for each one of the selected attributes. A threshold value is then selected for each of the attributes. The disk drive is then monitored for occurrences of the self-preserving, performance, error rate and event count attributes. Each time an occurrence of the attributes is monitored, the initial value for that attribute is updated and normalized. The updated normalized value for the attribute is then compared with the corresponding threshold for that attribute and an imminent failure of the disk drive is predicted if the normalized updated value of the attribute exceeds the threshold therefor.

33 Claims, 6 Drawing Sheets



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L3: Entry 16 of 16

File: USPT

Feb 17, 1998

DOCUMENT-IDENTIFIER: US 5720018 A

TITLE: Three-dimensional real-time monitoring of attributes of computer software processes

Brief Summary Text (14):

As a computer-implemented method for visualizing performance of processes of a computer system, an embodiment of the invention includes: providing a three-dimensional graphical model of the computer system having graphical objects for each of processes of the computer system that are to be monitored; displaying the three-dimensional graphical model on a display screen; monitoring attributes of the processes that are being monitored; and updating the three-dimensional graphical model on the display screen by altering characteristics of the graphical objects in accordance with the attributes monitored. Preferably, the graphical model further includes a graphical object for visually indicating a stall or block condition of a process.

CLAIMS:

11. A computer-implemented method for visualizing performance of software processes of a computer system, said method comprising:

- (a) providing a three-dimensional graphical model of the computer system having graphical objects for each of the software processes of the computer system that are to be monitored;
- (b) displaying the three-dimensional graphical model on a display screen;
- (c) monitoring attributes of the software processes that are being monitored; and
- (d) updating the three-dimensional graphical model on the display screen by altering characteristics of the graphical objects in accordance with the attributes monitored, said updating occurs at a rate such that a user viewing the display screen is given the impression that the three-dimensional graphical model being displayed is updated in nearly real time with respect to changes in the performance of the software processes being monitored.



US005720018A

United States Patent [19]

Muller et al.

[11] Patent Number: **5,720,018**[45] Date of Patent: **Feb. 17, 1998****[54] THREE-DIMENSIONAL REAL-TIME MONITORING OF ATTRIBUTES OF COMPUTER SOFTWARE PROCESSES**

[75] Inventors: **Hans Muller**, Saratoga; **Greg B. Nuyens**, Menlo Park, both of Calif.; **Qiang A. Zhao**, Atlanta, Ga.; **Nikhyl Singhal**, Stanford, Calif.

[73] Assignee: **Sun Microsystems, Inc.**, Mountain View, Calif.

[21] Appl. No.: **533,175**

[22] Filed: **Sep. 25, 1995**

[51] Int. Cl.⁶ **G06T 15/00**

[52] U.S. Cl. **395/133**

[58] Field of Search 395/133, 118,
395/119, 125, 141, 326, 334, 335, 348,
965, 961, 966, 967, 969

[56] References Cited**U.S. PATENT DOCUMENTS**

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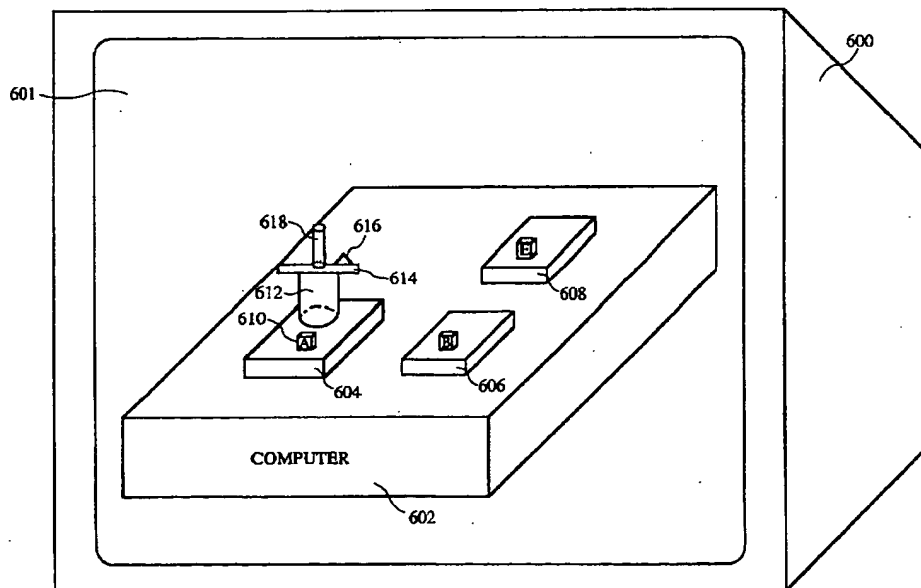
1994-95 Graphics Visualization & Usability Center, Project Abstracts, Georgia Institute of Technology.

Primary Examiner—Almis R. Jankus

Attorney, Agent, or Firm—Hickman Beyer & Weaver, LLP

[57] ABSTRACT

An improved technique for monitoring computer processes and their attributes using a three-dimensional graphical image. The three dimensional graphical image is formed by displaying the graphical objects associated with the computer processes and their attributes. The physical relationship between the various graphical objects within the graphical image preferably model the actual relationships between the processes and their attributes. The computers which run or activate the processes may also be represented by a graphical object within the graphical image. As the attributes of the computer processes change, the characteristics of the graphical objects are quickly adjusted and the three-dimensional graphical image is updated to reflect the changes to the attributes of the computer processes being monitored. By varying the characteristics of the graphical objects, a user is able to visually notice the changes that occur to the graphical objects of the three-dimensional graphical image as an indication of the changes taking place to the attributes of the processes being monitored.

31 Claims, 8 Drawing Sheets

cl3 *Stored user profile*

Hit List

Search Results - Record(s) 1 through 1 of 1 returned.

☐ 1. Document ID: US 5546379 A

L2: Entry 1 of 1

File: USPT

Aug 13, 1996

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DOCUMENT-IDENTIFIER: US 5546379 A

TITLE: Bandwidth-on-demand remote office network apparatus and method

Brief Summary Text (2):

The present invention relates to wide-area computer networks, and in particular (1) an algorithm which provides a bandwidth allocation based on network demand, throughput, and delay requirements; (2) an inverse multiplexing algorithm which distributes network load over multiple, parallel connections from the originating node to a destination node; (3) a method of enabling efficient exchange of packet data routing information; (4) a system which provides modem pooling, which is a method of sharing of number of modems among many network users; (5) an authentication procedure, which is employed in a network server; and (6) a virtual interface as a logical network interface for providing circuit switched connectivity between networks.

Detailed Description Text (47):

To determine whether a modem type satisfies the requirement of a modem characteristics, the modem's capabilities must contain every user defined tag which is specified in the modem characteristics record. For example, if the modem characteristic "DefaultModemChar" is defined which does not contain any user defined tags, then all modem types satisfy the requirement which includes N9631, N9635E2, and N9635EP modems. When specifying "DefaultModemChar" as the modem characteristics when dialing out, MPCF selects one of the dial-up ports which attached to either N9631, N9635E2, or N9635EP.

CLAIMS:

1. A modem pooling control apparatus for automatically selecting a modem from among a number of modems according to a plurality of modem requirements defined by a user, the apparatus comprising:

storage means for storing a plurality of modem capability parameters associated with a plurality of different types of modems with different command sets;

selection means for automatically selecting, on the basis of the stored plurality of modem capability parameters, a selected modem from the plurality of modems, such that the selected modem meets the plurality of modem requirements defined by the user; and

means for interconnecting the selected modem with a remote modem.

7. A modem pooling control method for automatically selecting a modem from among a

number of modems according to a plurality of modem requirements defined by a user, the method comprising steps of:

storing, in a database, a plurality of modem capability parameters associated with a plurality of different modems with a plurality of command sets;

automatically selecting, on the basis of the stored plurality of modem capability parameters, a selected modem from the plurality of modems, such that the selected modem meets the plurality of modem requirements defined by the user; and

interconnecting the selected modem with a remote modem.

8. A modem pooling control method as recited in claim 7, further comprising the step of

sending commands to said selected modem to configure said selected modem according to the plurality of modem requirements defined by said user.

10. A modem pooling control method as recited in claim 9, further comprising the step of

sending commands to said selected modem to configure said selected modem according to the plurality of modem requirements defined by said user.

11. A modem pooling control method as recited in claim 7, wherein said step of automatically selecting said selected modem comprises the steps of:

identifying a subset of said plurality of modems such that each modem of said subset of modems (1) has characteristics compatible with said requirements defined by said user, and (2) is able to be configured according to said requirements defined by said user; and

selecting said selected modem from said subset of modems.

12. A modem pooling control method as recited in claim 11, further comprising the step of

sending commands to said selected modem to configure said selected modem according to requirements defined by said user before a connection between said selected modem and said remote modem is made.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMIC	Draw De
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[Previous Page](#) [Next Page](#) [Go to Doc#](#)

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END OF SEARCH HISTORY

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L1: Entry 5 of 7

File: USPT

Aug 13, 1996

DOCUMENT-IDENTIFIER: US 5546379 A

TITLE: Bandwidth-on-demand remote office network apparatus and method

CLAIMS:

1. A modem pooling control apparatus for automatically selecting a modem from among a number of modems according to a plurality of modem requirements defined by a user, the apparatus comprising:

storage means for storing a plurality of modem capability parameters associated with a plurality of different types of modems with different command sets;

selection means for automatically selecting, on the basis of the stored plurality of modem capability parameters, a selected modem from the plurality of modems, such that the selected modem meets the plurality of modem requirements defined by the user; and

means for interconnecting the selected modem with a remote modem.

5. A modem pooling control apparatus as recited in claim 4, in which

said selection means includes capability interpreting means capable of interpreting said plurality of modem capability parameters while allowing said capability entry to comprise multiple text lines, and allowing a plurality of said capability entries to be comprised by a single text line.

6. A modem pooling control apparatus as recited in claim 4, in which

said selection means includes capability interpreting means capable of interpreting and using said plurality of modem capabilities parameter to select said selected modem from said plurality of modems regardless of how said capability entries are ordered within said

7. A modem pooling control method for automatically selecting a modem from among a number of modems according to a plurality of modem requirements ~~defined by a user~~ *user profile*, the method comprising steps of:

storing, in a database, a plurality of modem capability parameters associated with a plurality of different modems with a plurality of command sets;

automatically selecting, on the basis of the stored plurality of modem capability parameters, a selected modem from the plurality of modems, such that the selected modem meets the plurality of modem requirements defined by the user; and

interconnecting the selected modem with a remote modem.

13. A modem pooling control method comprising the steps of:

defining command strings needed for controlling a plurality of different types of modems;

storing, in a database, a plurality of modem capability parameters associated with a plurality of modems comprising the plurality of different types of modems and requiring a plurality of command sets, such that said plurality of modem capability parameters are organized into a plurality of modem definition records, each said

modem definition record comprising at least one modem entry, and each said modem entry comprising at least one capability entry;

selecting, on the basis of the said plurality of modem capability parameters, a selected modem from the plurality of different types of modems; and

interconnecting said selected modem with a remote modem.

16. A modem pooling control apparatus as recited in claim 5, in which said selection means ignores space, tab, and line feed characters while interpreting said plurality of capability parameter.



US005546379A

United States Patent [19]

Thaweethai et al.

[11] **Patent Number:** **5,546,379**[45] **Date of Patent:** **Aug. 13, 1996**[54] **BANDWIDTH-ON-DEMAND REMOTE OFFICE NETWORK APPARATUS AND METHOD**[75] Inventors: Ladavan Thaweethai, Milpitas;
Tien-Jan A. Moon, Cupertino, both of Calif.

[73] Assignee: NEC America, Melville, N.Y.

[21] Appl. No.: 295,051

[22] Filed: Aug. 26, 1994

Related U.S. Application Data

[62] Division of Ser. No. 130,456, Oct. 1, 1993.

[51] Int. Cl.⁶ H04B 1/38

[52] U.S. Cl. 370/17; 375/219; 375/222

[58] Field of Search 370/24, 110.1,
370/32, 41, 112, 53, 56, 68.1, 85.13, 13,
17; 375/219, 222, 121, 220; 379/93, 94;
340/825, 825.06, 825.15**References Cited****U.S. PATENT DOCUMENTS**

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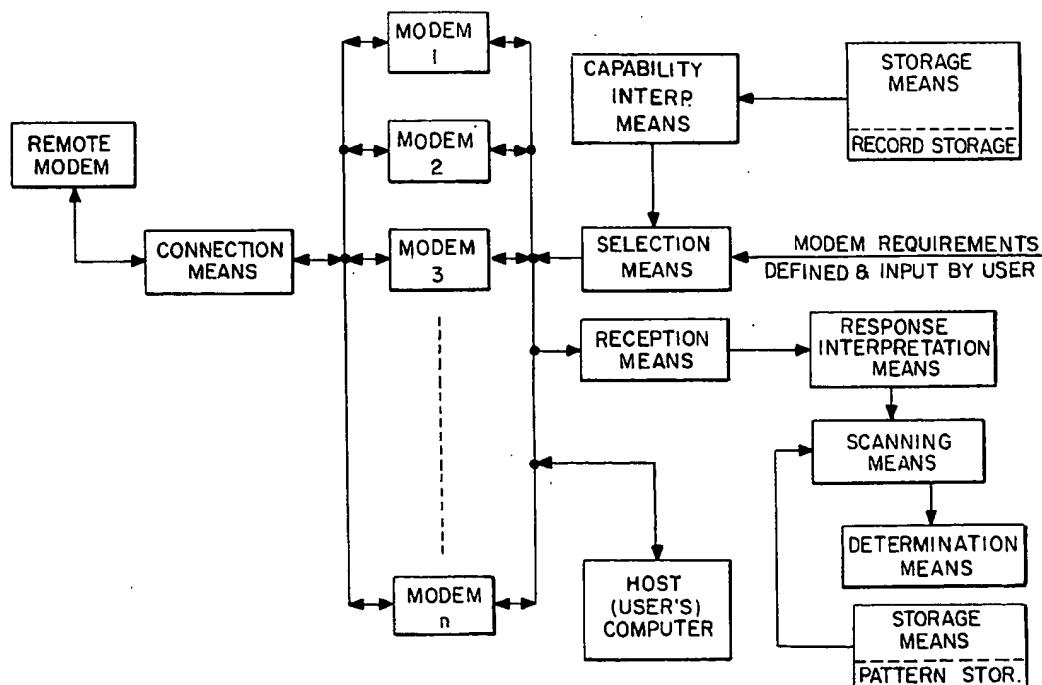
Primary Examiner—Melvin Marcelo

Assistant Examiner—Huy D. Vu

Attorney, Agent, or Firm—Sughrue, Mion, Zinn, Macpeak & Seas

[57] ABSTRACT

A wide-area computer network system provides bandwidth based on network demand, throughput, and delay requirements, distribution of network load over multiple, parallel connections from the originating node to a destination node, a method of enabling efficient exchange of packet data routing information, modem pooling, an authentication procedure, and a virtual interface as a logical network interface for providing circuit switched connectivity, such as a connection between a host/application and a remote network.

17 Claims, 4 Drawing Sheets

<u>Set Name</u>	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u>
side by side			result set
<i>DB=USPT; PLUR=YES; OP=ADJ</i>			
<u>L3</u>	L1 and (user\$ with profile\$)	1	<u>L3</u>
<u>L2</u>	L1 and (update\$)	1	<u>L2</u>
<u>L1</u>	(5961608).pn. or 6363426.pn.	2	<u>L1</u>

END OF SEARCH HISTORY

WEST[Generate Collection](#)[Print](#)**Search Results - Record(s) 1 through 1 of 1 returned.**☐ 1. Document ID: US 6363426 B1

L2: Entry 1 of 1

File: USPT

Mar 26, 2002

DOCUMENT-IDENTIFIER: US 6363426 B1

TITLE: System and method of allocating modem resources to software applications

US PATENT NO. (1):
6363426Detailed Description Text (20):

Once identified, the best fit data pump will be initialized and indexed or initialized to a state corresponding to the modem state expected by the requesting modem controller, step 160. Once the data pump is indexed to the expected state, then, in step 170, the control of the data pump will be turned over to the modem controller that initiated the data pump allocation request until the data pump is no longer needed. Preferably, the data pump status table will be updated to reflect that the allocated data pump is currently being utilized by a modem controller and is, therefore, unavailable for allocation to a subsequently issued data pump allocation request.

Detailed Description Text (21):

When the data pump is no longer required then, in step 180, the modem controller will release the data pump. The release will be coupled with a notification issued to the data pump allocation system that the data pump has been released, step 190. Accordingly the data pump allocation system will update its data pump status table to reflect that the released data pump is now available for allocation to another modem controller issuing a data pump allocation request.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw Desc	Image
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[Generate Collection](#)[Print](#)

Set Name Query

side by side

*DB=USPT; PLUR=~~YES~~; OP=ADJ*L6 L1 and (select\$ adj2 modem\$)L5 L1 and (select\$ 2adj modem\$)L4 L1 and (select\$ with modem\$).ab.L3 L1 and (select\$ with modem\$ with based with performance\$)L2 L1 and (modem and select\$ and performance\$).ab.L1 (((709/\$)!.CCLS.)**Hit Count Set Name**

result set

46 L60 L520 L42 L31 L214212 L1

END OF SEARCH HISTORY

WEST

[Generate Collection](#)[Print](#)

Search Results - Record(s) 1 through 10 of 46 returned.

☐ 1. Document ID: US 6453371 B1

L6: Entry 1 of 46

File: USPT

Sep 17, 2002

DOCUMENT-IDENTIFIER: US 6453371 B1

TITLE: Method, apparatus, and system for selection of a port for data exchange

Detailed Description Text (69):

The "HotSync" mode buttons 314 appear as radio buttons and enable the user to select between a modem synchronization and a local synchronization. Tapping on "Local" or "Modem" switches into the indicated "HotSync" mode, and changes the screen to display parameters unique to the indicated mode, e.g., the modem initiation string for the phone number that is set to be dialed to contact the network node corresponding to the modem. The "HotSync" mode button 314 can be set for a connection mode that does not relate to a physical accessory 180 capable of transmitting a data exchange request signal that includes an indication of an accessory type. If the user employs only one non-indicating port for data exchange; then, in order to minimize the need to reset the port preference, that non-indicating port should be selected as the preferred port. The selection of the port can then be essentially automatic, as the user will not have to reset the preferred port.

Current US Cross Reference Classification (1):709/203

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC	Draw Desc	Image
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☐ 2. Document ID: US 6426946 B1

L6: Entry 2 of 46

File: USPT

Jul 30, 2002

DOCUMENT-IDENTIFIER: US 6426946 B1

TITLE: Data communication equipment

Brief Summary Text (8):

First, in the communication protocol 13a for selecting a modulation mode and communication protocol, which permit communication between a caller modem and an answer modem, are selected through a V.21 modem (300 bps, full duplex) after a line connection is established. A facsimile machine using a V.34 modem selects a V.34 modem as the modulation mode and facsimile communication as a communication protocol.

Brief Summary Text (11):

In the communication protocol 13d for selecting a modem parameter, modem parameters are negotiated between the caller modem and answer modem in full duplex communication at 1200 bps, and an optimal modem parameter is selected from the modem parameters preset in the apparatus, the result of the line inspection and the

inspection of the reception quality of the training signals.

Brief Summary Text (14):

The aforementioned modem performs communication in accordance with the training parameter selected under the communication protocol 13b for communication line probing and the modem parameter selected under the communication protocol 13d for selection of a modem parameter. To compensate the line characteristic, the receiver modem executes communication using the filter coefficient that has learned in the modem training 13b. This ensure optimal data communication according to the line quality.

Detailed Description Text (14):

A line probing reception module 209 receives the line probing tones from a communication destination to inspect the line. Specifically, the line probing reception module 209 performs spectrum analysis on the received signals using the fast Fourier transform algorithm to select the optimal symbol rate and carrier frequency for the primary channel modem 207 and select other modem parameters.

Detailed Description Text (43):

The answer modem receives the line probing tones, performs spectrum analysis on the received signals using the fast Fourier transform algorithm to select the optimal symbol rate and carrier frequency for the primary channel modem 207 and select other modem parameters. The answer modem selects a communicatable training parameter from the selected contents and the contents of INFO0c and INFO0a, sets INFO0h and sends the training parameter and INFO0h.

Detailed Description Text (46):

The communication protocol 9d for setting a modem parameter will now be discussed. The caller modem and the answer modem send protocol sync signals PPh and ALT, a modem parameter MPh associated with data communication and an acknowledge signal E for the MPh from the opposite side, so that the caller modem and the answer modem exchange the MPh. The MPh of the caller modem is a modem parameter preset in the caller modem, while the MPh of the answer modem is a modem parameter, which has been selected from a preset modem parameter, the result of inspecting the received line probing tones and the SN computed from the received training signals. The communication protocol for setting a modem parameter is carried out using the control channel modem module 206 (1200 bps, full duplex) shown in FIG. 2.

Current US Cross Reference Classification (1):

709/228

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	INMC	Draw Desc	Image
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☐ 3. Document ID: US 6411393 B1

L6: Entry 3 of 46

File: USPT

Jun 25, 2002

DOCUMENT-IDENTIFIER: US 6411393 B1

TITLE: Apparatus and method of automatically delivering E-mail stored in mail server to arbitrary facsimile apparatus

Detailed Description Text (37):

Next, an exemplary procedure of the E-mail-in-facsimile-image delivery operation of Step S207 of FIG. 6 is explained with reference to FIG. 7. In Step S301 of FIG. 7, the Group 3 facsimile modem 10 initiates a call to a destination facsimile terminal, designated by the facsimile number of the selected user which is registered in the facsimile number 20d of the E-mail delivery information table 20. Then, in Step S302, the Group 3 facsimile modem 10 mutually performs a predetermined pre-transmission operation with the called facsimile terminal, including a selection

of transmission functions which may be used. Subsequently, the Group 3 facsimile modem 10 executes a modem training procedure at the selected modem speed and determines a real modem speed to be used. Then, in Step S304, the Group 3 facsimile modem 10 transmits the designated facsimile image file converted from the E-mail to the called facsimile terminal, in a predetermined facsimile transmission procedure.

Current US Cross Reference Classification (4):
709/206

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KNWC	Draw Desc	Image
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☐ 4. Document ID: US 6393478 B1

L6: Entry 4 of 46

File: USPT

May 21, 2002

DOCUMENT-IDENTIFIER: US 6393478 B1
TITLE: Cable modem and personal computer troubleshooting tool

Detailed Description Text (37):

FIG. 25 is an example of a port filter page 2500. FIG. 26 is the associated flow diagram to obtain the current port filter parameters from the selected MAC address 601. FIG. 27 is the flow diagram to establish new port filter parameters at the selected MAC address 601. Port numbers are descriptive addresses used in establishing communication connections between applications running on different computers. Commonly agreed upon port numbers include 80 for web servers, 21 for File Transfer Protocol applications, and 70 for gopher applications. The port filter function is a way of passing and blocking different types of traffic. FIG. 25 shown an example of the filter types provided for selected cable modems, such as the LANCity, Inc. cable modems. The three filter types are manual filtering 2502, standard filtering 250 and limited filtering 2506. Limited filtering 2506 includes an Ethernet type filtering group 2508, always active, an IP only filter 2508, always active, and defaults IP port filters #2, filter 2512 and #3, filter 2514 to block IP ports 67 and 68 respectively. These default settings on filters 2512 and 2514 are used to block customer DHCP servers from interfering with the service provider's DHCP server 106. Standard filtering 2504 provides for the Ethernet type filtering 2508, IP Only filtering 2510, the default DHCP filters 2512 and 2514, plus blocking IP ports 137 through 139, as shown in filter #1 2516. Manual filtering 2502 allows all of the port filter parameters to be set manually. Other types of port filters could be included on the port filter page 2500. For example, certain types of LANCity, Inc. cable modems support the Spanning Tree Protocol (STP) (IEEE standard 802.1D) An STP on/off parameter may be included on the port address page 2500 to allow the web client 208 the ability to switch the STP feature on and off.

Current US Original Classification (1):
709/224

Current US Cross Reference Classification (1):
709/225

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KNWC	Draw Desc	Image
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☐ 5. Document ID: US 6393430 B1

L6: Entry 5 of 46

File: USPT

May 21, 2002

DOCUMENT-IDENTIFIER: US 6393430 B1

TITLE: Method and system for automatically recording music data files by using the hard drive of a personal computer as an intermediate storage medium

Current US Cross Reference Classification (5):
709/217

CLAIMS:

18. The system of claim 17, wherein the information accessing unit for accessing audio/visual selections is a modem of the personal computer.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KM4C	Draw Desc	Image
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☐ 6. Document ID: US 6374288 B1

L6: Entry 6 of 46

File: USPT

Apr 16, 2002

DOCUMENT-IDENTIFIER: US 6374288 B1

TITLE: Digital subscriber line server system and method for dynamically changing bit rates in response to user requests and to message types

Detailed Description Text (45):

A customer or network administrator can select an xDSL modem rate schedule option for the customer service plan data 322(A) by using a Web page similar to that shown on the following Table 2. In addition to time-of-day, day-of-week information can also be used to define an xDSL modem rate schedule.

Current US Original Classification (1):
709/203

Current US Cross Reference Classification (2):
709/217

Current US Cross Reference Classification (3):
709/223

Current US Cross Reference Classification (4):
709/224

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KM4C	Draw Desc	Image
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☐ 7. Document ID: US 6363426 B1

L6: Entry 7 of 46

File: USPT

Mar 26, 2002

DOCUMENT-IDENTIFIER: US 6363426 B1

TITLE: System and method of allocating modem resources to software applications

Brief Summary Text (7):

In this configuration, the direct modem connection is replaced by several components

that allow the application to use any one of a number of modems that are attached to the network server 30. These components include the LAN 28, which provides a communications link between the client computer 20 and the network server 30. The server 30 has a simple modem allocator 32 that selects an available modem from a set of modems 34a-n before a first modem command is issued by the software application.

Brief Summary Text (9):

However, there are situations where the selection of a modem will depend, in large part, on information contained in commands issued by a software application subsequent to the first command. This means that some portion of the interaction of the application with a modem must occur before the specific modem to be allocated can be chosen and selected.

Current US Original Classification (1):

709/226

Current US Cross Reference Classification (1):

709/201

Current US Cross Reference Classification (2):

709/227

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 8. Document ID: US 6359894 B1

L6: Entry 8 of 46

File: USPT

Mar 19, 2002

DOCUMENT-IDENTIFIER: US 6359894 B1

TITLE: Remote communications server system

Detailed Description Text (746):

This telnet session can only be used to select the modem line from the RNServer. Selection of modem line is made at the client. After selecting the modem, telnet client closes the session and opens another session on different port which is not used by the telnet server, to handle data transfer between RNserver and telnet client. Suitable buffering mechanism is adopted at the server end to facilitate data transfer on the modem line.

Current US Cross Reference Classification (2):

709/219

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 9. Document ID: US 6272150 B1

L6: Entry 9 of 46

File: USPT

Aug 7, 2001

DOCUMENT-IDENTIFIER: US 6272150 B1

TITLE: Cable modem map display for network management of a cable data delivery system

Current US Cross Reference Classification (2):

709/217

CLAIMS:

10. The apparatus of claim 9, wherein the information displayed by said display device includes the physical location of selected said modems.

11. The apparatus of claim 10, wherein the information displayed by said display device includes topology information showing the location of selected modems in the network with respect to the location of other selected modems.

25. The method of claim 24, wherein the information displayed by said display device includes the physical location of selected said modems.

26. The method of claim 25, wherein the information displayed by said display device includes topology information showing the location of selected modems in the network with respect to the location of other selected modems.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 10. Document ID: US 6212566 B1

L6: Entry 10 of 46

File: USPT

Apr 3, 2001

DOCUMENT-IDENTIFIER: US 6212566 B1

TITLE: Interprocess communication protocol system modem

Brief Summary Text (26):

When designing a modem, the designer selects modem algorithms and parameters based upon the channel characteristics and the required modem performance. This design can be accelerated with a fast simulator for particular modem algorithms, including particular modem parameters and the ability to observe many internal signals.

Current US Original Classification (1):709/230Current US Cross Reference Classification (1):709/200Current US Cross Reference Classification (2):709/231Current US Cross Reference Classification (3):709/237

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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[Generate Collection](#)[Print](#)

WEST[Generate Collection](#)[Print](#)**Search Results - Record(s) 11 through 20 of 46 returned.**☐ 11. Document ID: US 6211797 B1

L6: Entry 11 of 46

File: USPT

Apr 3, 2001

DOCUMENT-IDENTIFIER: US 6211797 B1

TITLE: Infrared communication control apparatus and method

Abstract Text (1):

An object of the invention is to make it possible to switch a plurality of infrared communication schemes without depending on an automatic detection of infrared signals. A plurality of communication ports are related to a plurality of infrared communication schemes, respectively. When the communication port is opened, a communication port controller refers to a relating information table of a memory to send relating information to an infrared protocol selector and an infrared modulation/demodulation scheme selector. An IrDA infrared protocol generator, an ASK infrared protocol generator or a consumer IR infrared protocol generator is selected, and then an IrDA modem, an ASK modem or a consumer IR modem is selected. Data communication of infrared signals is conducted through an infrared unit in accordance with the protocol and the modulation/demodulation scheme thus selected.

Detailed Description Text (10):

FIG. 5 shows an operation of transmitting data by the application program through the opened communication port 11. The operation starts with step c0. In step c1, the application program transmits data to the opened communication port 11. In step c2, a protocol for data transmission is generated by using the selected infrared protocol generator. In step c3, the protocol thus generated is supplied to the selected infrared modem and the data is modulated. In step c4, the modulated data is transmitted from the infrared unit 23. In step c5, the echo characteristic of the infrared signals is checked, and when an echo exists, it is canceled in step c6. When an echo does not exist in step c5 or when the echo is canceled in step c6, the operation is terminated in step c7. In the infrared unit, such an echo may occur as the transmitted data is jumped back and received due to the characteristic of the infrared rays. The echo cancellation is a process to eliminate the echo data.

Detailed Description Text (11):

FIG. 6 shows an operation of receiving data by the application program through the opened communication port 11. The operation starts with step d0. In step d1, the application program receives data from the opened communication port 11. In step d2, the received data is retrieved from the reception buffer 25. In step d3, a protocol section is deleted from the received data by using the infrared protocol generator selected when the communication port 11 is opened. The data from which the protocol section is deleted constitute data which can be interpreted by the application program. The reception buffer 25, which is secured in the memory 26, stores the received data by processing an interrupt for reception. Upon receiving infrared signals 27 by the infrared unit 23, an interrupt signal for reception is generated, and the communication port controller 12 handles the interrupt. The reception interrupt process is started with step d10. In step d11, the data is demodulated by the selected infrared modem. In step d12, the demodulated data is stored in the reception buffer 25, followed by step d13 where the interrupt process for reception is completed and the process returns to what is executed when the interrupt process is generated.

Current US Cross Reference Classification (6):

709/228

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWMC	Draw Desc	Image
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☐ 12. Document ID: US 6205522 B1

L6: Entry 12 of 46

File: USPT

Mar 20, 2001

DOCUMENT-IDENTIFIER: US 6205522 B1

TITLE: DSP code swapping with continuous DSP execution

Brief Summary Text (9):

Some companies have recognized in the modem arena that, for instance, the processing of modem data in various countries is the same, and only the network interface differs. These companies have developed communication adapters (primarily line conditioning and media conversion circuitry, e.g., DAA circuitry) that can be selectively coupled with their modem and that supply the necessary hardware and software configuration information to the modem in order to allow the modem to engage in any necessary signal processing to comply with the standards of various countries. These adaptors themselves perform no signal processing functions and in fact, the core software on the base system remains the same. The signal processing system itself can be used to perform no other function than that of a modem.

Current US Cross Reference Classification (1):709/200Current US Cross Reference Classification (2):709/212

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWMC	Draw Desc	Image
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☐ 13. Document ID: US 6175873 B1

L6: Entry 13 of 46

File: USPT

Jan 16, 2001

DOCUMENT-IDENTIFIER: US 6175873 B1

TITLE: Method for acquiring communication information

Detailed Description Text (21):

When the user A selects, via the modem 8, a mode for setting up the message and IDs of users for specifying the receivers to whom the message is to be transmitted, a control section 12 outputs an ID of the user A to an address control section 13 via a route (a).

Current US Original Classification (1):709/237Current US Cross Reference Classification (1):709/207Current US Cross Reference Classification (2):709/229

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KMOC	Draw Desc	Image
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☐ 14. Document ID: US 6119162 A

L6: Entry 14 of 46

File: USPT

Sep 12, 2000

DOCUMENT-IDENTIFIER: US 6119162 A

TITLE: Methods and apparatus for dynamic internet server selection

Detailed Description Text (7):

When any of computers 12 or computer 19 needs access to the Internet, a server is selected from among the available computers 12. Computer 19 cannot be selected as a server, because it does not have a modem, and cannot establish a connection to ISP 16.

Current US Original Classification (1):709/227Current US Cross Reference Classification (1):709/220Current US Cross Reference Classification (2):709/221Current US Cross Reference Classification (3):709/249

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KMOC	Draw Desc	Image
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☐ 15. Document ID: US 6047319 A

L6: Entry 15 of 46

File: USPT

Apr 4, 2000

DOCUMENT-IDENTIFIER: US 6047319 A

TITLE: Network terminal server with full API implementation

Detailed Description Text (125):

The Set Modem Outputs and Flow Control packet is sent by the client 18 to set modem outputs, and select modem-signal hardware flow control. Note that when RTS and DTR modem flow control are selected, the values of RTS and DTR in MOUT are ignored.

Current US Original Classification (1):709/223Current US Cross Reference Classification (1):709/220

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KMOC	Draw Desc	Image
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☐ 16. Document ID: US 6032193 A

L6: Entry 16 of 46

File: USPT

Feb 29, 2000

DOCUMENT-IDENTIFIER: US 6032193 A

TITLE: Computer system having virtual circuit address altered by local computer to switch to different physical data link to increase data transmission bandwidth

Detailed Description Text (45):

Referring now to FIGS. 5A and 5B, two exemplary timing diagrams are shown to illustrate the selection of modem 104 for locally assigning the connection to the least busy receiver link. In these examples, two modems 104, designated modem #1 and modem #2, are used for receiving data from remote computer 110. In particular, FIG. 5A shows the downloading of a web page in accordance with a round robin algorithm. Typically, web browser software only permits four connections at a given time. Thus, as shown in FIG. 5A, the distributive interface of the invention assigns the first and third connections to the primary link and the second and fourth connections to the secondary link. Generally, each of the connections includes the exchange of a connect request and acknowledgement, followed by the exchange of a query and reply and the exchange of acknowledgements and replies, and ending with the exchange of a finish request and acknowledgement. If further connections are needed to fully access the web page, additional connections are assigned to alternating modems 104 as shown in FIG. 5A.

Current US Original Classification (1):709/239Current US Cross Reference Classification (3):709/238Current US Cross Reference Classification (4):709/242

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 17. Document ID: US 6028984 A

L6: Entry 17 of 46

File: USPT

Feb 22, 2000

DOCUMENT-IDENTIFIER: US 6028984 A

TITLE: Method and apparatus for making a seamless network connection

Detailed Description Text (11):

FIG. 2 illustrates an expanded block diagram of the switching subsystem 300 of the present invention. The switch 410 routes the signals between the computer 310 and the wireless modem 340 or the network interface device 330. Upon initialization, the switch decision logic 430 provides a signal to the switch 410 instructing it to connect to the primary network interface. In the preferred embodiment, the primary device is the network interface device 330. Alternate embodiments could select the wireless modem 340 as the primary (or default) device. Additionally, other embodiments allow the user to program his or her primary device selection.

Current US Original Classification (1):709/249

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 18. Document ID: US 6012088 A

L6: Entry 18 of 46

File: USPT

Jan 4, 2000

DOCUMENT-IDENTIFIER: US 6012088 A

TITLE: Automatic configuration for internet access device

Current US Original Classification (1):709/219Current US Cross Reference Classification (1):709/220

CLAIMS:

1. A computer-implemented method of automatically configuring an access device for communication with a communications network, said method comprising the steps of:

connecting said access device to a configuration server;

sending a customer account identifier from the access device to the configuration server;

requesting that said configuration server return a configuration record identified by said customer account identifier, said configuration record containing configuration information for said access device;

downloading said configuration record from said configuration server to said access device; and

configuring said access device for communication with said communications network using said configuration information of said configuration record, wherein said step of configuring said access device includes the sub-steps of:

configuring one selected from the group of a modem, an ISDN adapter, and a synchronous serial interface; and

configuring a router of said access device.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWAC	Draw Desc	Image
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☐ 19. Document ID: US 5978833 A

L6: Entry 19 of 46

File: USPT

Nov 2, 1999

DOCUMENT-IDENTIFIER: US 5978833 A

TITLE: Method and apparatus for accessing and downloading information from the internet

Detailed Description Text (22):

Flash memory 35 is used to store the information downloaded from an internet site corresponding to a predefined search criteria that the user has entered. Although the speed with which information can be stored in a flash memory device is relatively slow with respect to, for example, data stored in RAM, the delay in

storage speed is imperceptible to a user because, as described above with respect to the selection of the processor and modem, searching and downloading information from the internet to the computer system is automatically done during a period of time in which the user is not directly interacting with the computer system. In accordance with an embodiment of the present invention, as information is downloaded from the internet via a phone line and through modem 34 to bus 31, the information is temporarily buffered in RAM 37 before being transferred into flash memory 35. For an alternate embodiment of the present invention, modem 34 buffers the data, placing it in a format which can be quickly stored in flash 35.

Current US Original Classification (1):
709/200

Current US Cross Reference Classification (1):
709/231

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KNIC	Draw Desc	Image
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☐ 20. Document ID: US 5961608 A

L6: Entry 20 of 46

File: USPT

Oct 5, 1999

DOCUMENT-IDENTIFIER: US 5961608 A
TITLE: Modem and communications control selection

Abstract Text (1):

A simple, flexible and easy-to-use user interface and control mechanism for remote communication supports multiple modems or phone lines being connected and disconnected from a computing or "info-tainment" apparatus. This facilitates remote communications on different types of communications lines and from different locations. The user selects among modems, phone lines or other communication devices by simply physically connecting or disconnecting them from the computer, which is automatically detected. The default response is to select the newly connected modem or line as the currently active communication device, or to activate any other currently connected communication device when the active device is disconnected. A modem and location selection menu pops up giving the user a chance either to confirm or alter this selection. Application software uses an operating system interface to access a communication network via the selected device, which allows the modem selection to apply to all applications software. Also, a communication device's parameters are set up based on the user selecting a "location" parameter, whose value indicates an area within which the apparatus is coupled to the communication network. The modem initialization string, access prefix, account code, phone number to dial and/or whether an area code is dialed can be altered based on how the user sets up the current location--the location "cellular" can select a modem initialization string for an appropriate baud-rate range and protocol and can alter the access number of the communication service provider to dial into cellular-capable modems.

Brief Summary Text (13):

In some embodiments, a modem selection menu pops up in response to a communication device being connected, which automatically shows the newly connected modem or line as the currently active communication device, but which facilitates the user either altering this automatic selection or simply confirming it. Similarly in response to the currently active device being disconnected, the user can confirm or alter the automatic selection of a different modem or line, via a menu that automatically pops up.

Brief Summary Text (18):

For example, a location parameter value of "cellular" can be defined by the user to

select a modem initialization string that selects a baud-rate range and protocol appropriate for cellular communications and to alter the access number of the communication service provider to dial into their modems that support cellular protocols.

Detailed Description Text (4):

The present invention provides an operating system or system software which switches between a modem driver for a modem on a removable card, for an internal modem, or for an external modem based on selecting the current modem. This selection is made by simple user actions within an intuitive and easy to use metaphor. Based on the user's actions, the system software dynamically changes the pointers to the currently selected modem driver and/or the currently selected serial driver.

Detailed Description Text (8):

Similarly, when the user removes a modem card from his apparatus, the software detects the card removal, removes the name of the modem from the available modem menu, and if necessary and possible, automatically selects an alternative modem as the currently active communication device. The alternative selection is necessary if the disconnected modem was selected. The alternative selection is possible if another modem is connected.

Detailed Description Text (9):

When the user connects a phone line to a jack on his apparatus, the system detects this new connection and automatically selects the internal modem that uses the jack. Disconnecting a phone line is detected and the system software removes the name of the corresponding internal modem from the available modem menu, and if necessary and possible, automatically selects an alternative modem as the currently active communication device.

Detailed Description Text (32):

FIG. 5 shows location and modem window 1100, which allows the user to select, or to confirm the system's automatic selection of, a current modem and a current location. Location and modem window 1100 includes a location choice box 1110, and a modem choice box 1120.

Detailed Description Text (34):

Location and modem window 1100 also includes a modem button 1140, that when selected displays a modem setup screen, as shown in FIG. 9. The modem set up screen allows a user to change the serial speed, the modem-to-modem speed, the cellular phone driver, and to add some specific AT commands into a modem initialization string. Location and modem window 1100 also includes a mail button 1150 that allows the user to access a communications service.

Detailed Description Text (46):

Similarly, the user may select a modem for each location. The user may select one of the locations in the list as shown in FIG. 8, open window 1430 and request that a modem choice box (not shown) be displayed. The modem choice box is similar to the "Use custom number" choice box, except that it allows the user to select a modem rather than a phone number. After that one-time definition of what modem to use from a particular location, whenever the user changes to that location, the proper modem for it is automatically selected. Thus, the user often does not have to explicitly change the current modem before accessing a remote service or communication network.

Detailed Description Text (52):

The system modem driver provides an interface between application software and system software. This interface is illustrated in FIG. 12. The application software can issue commands to the currently selected system modem by means of calling the methods shown in FIG. 12, i.e. Open, Close, Read, Write, Disconnect, ConnectToNumber and Abort. Application software which uses the modem device refers to the system modem indexical when it calls the modem interface methods, thus invoking the driver for the currently selected system modem.

Detailed Description Text (61):

At step 750, the system software creates an available modem profile list, also held

in internal memory 420, by selecting from supported modem profile list 700 those profiles for the internal modem and for any external modems currently connected to apparatus 100. Available modem profile list 720, as shown in the example given in FIG. 13(a), includes modem profiles for the internal modem and two external modems. At step 760, the software creates a modem menu from available modem profile list 720.

Detailed Description Text (72):

Similarly, when the user connects a phone line to the apparatus, the system detects it and notifies the software. The software executes steps 920 and 930. Therefore, when a user connects a phone line to the apparatus, the software automatically selects the system modem.

Current US Original Classification (1):

709/249

Current US Cross Reference Classification (1):

709/228

Full Title Citation Front Review Classification Date Reference Sequences Attachments

KWIC Draw Desc Image

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Term	Documents
SELECT\$	0
SELECT.USPT.	281510
SELECTA.USPT.	57
SELECTABBLE.USPT.	1
SELECTABE.USPT.	2
SELECTABEL.USPT.	7
SELECTABILILTY.USPT.	1
SELECTABILITY.USPT.	839
SELECTABLE.USPT.	65017
SELECTABLEATTENUATION.USPT.	1
SELECTABLEBY.USPT.	1
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There are more results than shown above. Click here to view the entire set.

Display Format:

KWIC

Change Format

Previous Page

Next Page

WEST[Generate Collection](#)[Print](#)**Search Results - Record(s) 21 through 30 of 46 returned.**☐ 21. Document ID: US 5954797 A

L6: Entry 21 of 46

File: USPT

Sep 21, 1999

DOCUMENT-IDENTIFIER: US 5954797 A

TITLE: System and method for maintaining compatibility among network nodes connected to a computer network

Detailed Description Text (26):

For example, a first group or class of computers, G1, comprising computers C1 and C2, may have been adjusted by selecting certain modem options to communicate with each other. Similarly, a second group of computers, G2, comprising computers C3 and C4, may have been adjusted by modem options to communicate with each other. If the modem options in both groups are not identical, the G1 computers will be able to communicate with each other and the G2 computers will be able to communicate with each other, but the G1 computers will not be able to communicate with the G2 computers, and vice versa. The entries in KIT 333 would indicate that all computers in G1 are mutually compatible and that all computers in G2 are mutually compatible.

Current US Original Classification (1):

709/223

Current US Cross Reference Classification (1):

709/242

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KVMC	Draw Desc	Image
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☐ 22. Document ID: US 5894479 A

L6: Entry 22 of 46

File: USPT

Apr 13, 1999

DOCUMENT-IDENTIFIER: US 5894479 A

TITLE: Providing address resolution information for self registration of clients on power-up or dial-in

Brief Summary Text (15):

For example, where the upstream device is an analog modem (dialing into a POTS server), and the downstream device is a cable modem, the client PC will have two IP addresses--one having been statically assigned to the cable modem, the other being assigned to the analog modem. Immediately after the client initiates a connection with the headend server via the POTS server, the client will be sent a "MAC-request" packet requesting IP and MAC address information. In response, the client will send a "MAC-reply" packet which will contain the client's IP and MAC address information. The POTS server will forward this information to the headend server, which will update its ARP table. Thereafter, when the client requests data from the headend server, the headend server will respond to the request by looking up the MAC address to which to send the requested data. However, as the lookup will be done by using

the IP address of the ANALOG modem (i.e., the client PC's upstream device), the MAC address returned will be the MAC address of the analog modem. The headend server will thus select the analog modem instead of the cable modem as the receiving device, thereby undesirably transmitting downstream data to the analog modem, which is the slower connection.

Current US Cross Reference Classification (1):
709/222

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWMC	Draw Desc	Image
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☐ 23. Document ID: US 5870609 A

L6: Entry 23 of 46

File: USPT

Feb 9, 1999

DOCUMENT-IDENTIFIER: US 5870609 A

TITLE: Technique for bootstrapping executable code to an adapter

Detailed Description Text (19):

With reference now to FIGS. 3, 4 and 5A-5D, there is shown a block diagram and flow charts of software referred to as redirector software 58. The redirector software's function is to permit the use of existing modem control software to transparently work with the modem adapter 10 of the present invention. Existing modem control software, e.g., CROSSTALK, PROCOMM, MIRROR, etc., presume the existence of a serial I/O chip, 8250 or equivalent, as a communication port at a specified I/O location. The serial I/O chip, referred to as a UART or universal asynchronous receiver transmitter, or a USART is the interface between the PC and a modem or serial RS-232 link. These communication I/O ports in a PC are referred to as COM1, COM2, COM3 and COM4 where the first two ports are located at default address blocks beginning at 0x3F8 and 0x2F8, respectively. However, in the present invention, the modem adapter 10 is instead interfaced to the standard PC parallel port 20 on the PC 22 at a specified, but different, I/O location. These standard PC parallel ports are referred to as LPT1, LPT2 and LPT3 where the first two ports are typically located at default address blocks starting at 0x378 and 0x278, respectively. While the designation of the I/O port address is normally alterable from a menu selection in the modem control software, the I/O protocol for interfacing to a serial I/O port, which is normally dedicated to interface to a modem or other serial interface, and a standard PC parallel port, which is normally dedicated to interface to a Centronics compatible printer, differ significantly. Thus, the redirector software 58 intercepts serial I/O port commands and instead outputs reformatted parallel port commands to the modem adapter 10 to permit the transparent use of the existing modem control software. Due to the mode of operation for the microprocessor required by the redirector software 58, this task cannot be accomplished on all compatible PCs but instead can only be accomplished on PCs with a 386 or later generation processor as its microprocessor controller. Thus, the 386, 486, Pentium, future compatible processors and equivalents support the use of the redirector software 58 while PCs based upon the 86, 186 and 286 or equivalent microprocessors cannot be supported.

Current US Cross Reference Classification (1):
709/321

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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☐ 24. Document ID: US 5838913 A

L6: Entry 24 of 46

File: USPT

Nov 17, 1998

DOCUMENT-IDENTIFIER: US 5838913 A

TITLE: Control message transmission in telecommunications systems

Detailed Description Text (38):

The first protocol is used for information exchange in both directions between the site controller 56, or element controller 58 if connected instead, and a selected modem shelf controller 73. In the following description of the first protocol, the term management processor will be used for ease of reference to be either a site controller or an element manager, as the first message protocol is the same whether a site controller 56 is connected to a shelf controller 72 via an RS232 link 55, or an element manager 58 is connected to a shelf controller via an X.25 link 57 and the pad 228.

Current US Original Classification (1):709/208

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 25. Document ID: US 5790796 A

L6: Entry 25 of 46

File: USPT

Aug 4, 1998

DOCUMENT-IDENTIFIER: US 5790796 A

TITLE: Polymorphic package files to update software components

Detailed Description Text (23):

Referring to FIG. 4, there is shown a flowchart illustrating the operation of the client 104 retrieving the master object 200 from the server memory 106. If the program 208 is configured 400, the program 208 uses 401 the existing configuration. If the program 208 is not configured 400, the program 208 determines 402 the available servers 102, the available communication channels 110, and the available software for communicating over the channel 110 for the transfer. The available software is the software stored in the client 104, such as operating system and protocol, that is used for communicating over the channel 110. The program 208 selects 404 the transfer protocol, host, and location from those that are available by comparing the available protocols with a priority list of protocols and selecting the available protocol with the highest priority. The priority list may be, for example, first select TCP/IP communication first and second select modem communication. Alternatively, the selection may be in accordance with a set of rules that evaluate the traffic on the channel, the data transfer rate, and the like. The program 208 attempts to connect 406 to the host or server 102. If 408 a connection is not made, the program 208 selects 410 the next protocol, host, and location and again tries to connect 406.

Current US Original Classification (1):709/221

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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☐ 26. Document ID: US 5786770 A

L6: Entry 26 of 46

File: USPT

Jul 28, 1998

DOCUMENT-IDENTIFIER: US 5786770 A
TITLE: Message handling in a telecommunications network

Detailed Description Text (38):

The first protocol is used for information exchange in both directions between the site controller 56, or element controller 58 if connected instead, and a selected modem shelf controller 73. In the following description of the first protocol, the term management processor will be used for ease of reference to be either a site controller or an element manager, as the first message protocol is the same whether a site controller 56 is connected to a shelf controller 72 via an RS232 link 55, or an element manager 58 is connected to a shelf controller via an X.25 link 57 and the pad 228.

Current US Cross Reference Classification (3):
709/225

Current US Cross Reference Classification (4):
709/228

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KINC	Draw Desc	Image
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☐ 27. Document ID: US 5761429 A

L6: Entry 27 of 46

File: USPT

Jun 2, 1998

DOCUMENT-IDENTIFIER: US 5761429 A
TITLE: Network controller for monitoring the status of a network

Detailed Description Text (38):

The first protocol is used for information exchange in both directions between the site controller 56, or element controller 58 if connected instead, and a selected modem shelf controller 73. In the following description of the first protocol, the term management processor will be used for ease of reference to be either a site controller or an element manager, as the first message protocol is the same whether a site controller 56 is connected to a shelf controller 72 via an RS232 link 55, or an element manager 58 is connected to a shelf controller via an X.25 link 57 and the pad 228.

Current US Original Classification (1):
709/224

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KINC	Draw Desc	Image
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☐ 28. Document ID: US 5734871 A

L6: Entry 28 of 46

File: USPT

Mar 31, 1998

DOCUMENT-IDENTIFIER: US 5734871 A
TITLE: Method for and apparatus for controlling the execution of host computer application programs through a second computer

Detailed Description Text (220):

With the selected modem OK pattern highlighted Edit Patterns is selected from the MPedit menu. The MPedit window appears.

Current US Original Classification (1):

709/320

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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☐ 29. Document ID: US 5712977 A

L6: Entry 29 of 46

File: USPT

Jan 27, 1998

DOCUMENT-IDENTIFIER: US 5712977 A

TITLE: Method and apparatus for initial country selection in a universal modem with cable

Current US Cross Reference Classification (2):

709/228

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWMC	Draw Desc	Image
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☐ 30. Document ID: US 5696903 A

L6: Entry 30 of 46

File: USPT

Dec 9, 1997

DOCUMENT-IDENTIFIER: US 5696903 A

TITLE: Hierarchical communications system using microlink, data rate switching, frequency hopping and vehicular local area networking

Detailed Description Text (157):

To facilitate hopping management, a hopping control portion of a protocol controller will download a hopping table to a radio modem, and will signal the radio modem when to hop. This approach consolidates timing functions in the protocol controller, while not requiring the controller to be concerned with conveying frequency selection data to the modem each hop.

Current US Original Classification (1):

709/228

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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